

CLAIMS

[1] An image transmission system comprising:

a plurality of image generating apparatuses, each of which is
5 operable to generate an image; and

an image projecting apparatus operable to project the
plurality of images transmitted from said image generating
apparatus through a multimode, in which the plurality of images are
simultaneously projected onto a projection screen divided into a
10 plurality of segments,

wherein said image generating apparatus includes:

an image generating unit operable to generate an image;

a transmission image adjustment unit operable to perform
image adjustment on one of an image transmission and an image
15 projection by said image projecting apparatus; and

a transmission unit operable to transmit the adjusted image
to said image projecting apparatus, and

said image projecting apparatus includes:

a receiving unit operable to receive the image transmitted
20 from said image generating apparatus;

an output image adjustment unit operable to judge a content
of the adjustment performed on the received image, and then to
perform readjustment on the image based on the judgment; and

a projecting unit operable to project the readjusted image.
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[2] The image transmission system according to Claim 1,

wherein said transmission image adjustment unit is operable
to perform image adjustment that corresponds to one of the
multimode and a full-screen mode for projecting an image onto an
30 entire projection screen of said image projecting apparatus.

[3] The image transmission system according to Claim 2,

wherein said output image adjustment unit is operable to change from the multimode to the full-screen mode, and then to perform readjustment on the image, in the case where an image readjusted in the multimode is changed from a status in which the adjustment corresponding to the multimode is performed to a status in which the adjustment corresponding to the full-screen mode is performed.

[4] The image transmission system according to Claim 2,

wherein said output image adjustment unit is operable to change from the full-screen mode to the multimode, and then to perform readjustment on the image, in the case where the image readjusted in the full-screen mode is changed from a status in which the adjustment corresponding to the full-screen mode is performed to a status in which the adjustment corresponding to the multimode is performed.

[5] The image transmission system according to Claim 2,

wherein said output image adjustment unit is operable to perform readjustment by prioritizing the image in other image generating apparatus, which is received later by said receiving unit, in the case where the image is performed the readjustment in the multimode.

[6] The image transmission system according to Claim 2,

wherein said output image adjustment unit is operable to perform readjustment by prioritizing the images on which readjustment is performed currently, and not to perform readjustment on the images in other image generating apparatuses received later by said receiving unit, in the case where the image is performed the readjustment in the full-screen mode.

[7] The image transmission system according to Claim 1,
wherein said output image adjustment unit is operable to
perform readjustment on the received image using an index mode
for projecting simultaneously the plurality of images onto the
5 projection screen by dividing the projection screen into a main area
and a plurality of sub-areas.

[8] The image transmission system according to Claim 7,
wherein said image projecting apparatus further includes:

10 a selection acceptance unit operable to accept a selection of
an image out of the plurality of images respectively projected onto
the plurality of sub-areas, and

said output image adjustment unit is operable to perform
readjustment the selected image, and then to project the selected
15 image onto the main area.

[9] The image transmission system according to Claim 1,
wherein said image generating apparatus further includes
a separation unit operable to separate layers composing the
20 image into layer to be transmitted to said image projecting
apparatus and layer not to be transmitted,

wherein said transmission image adjustment unit is operable
to perform image adjustment on the separated layer to be
transmitted for one of a layer transmission and a projection by said
25 image projecting apparatus,

said transmission unit is operable to transmit the adjusted
layers to said image projecting apparatus,

said receiving unit is operable to receive the layer transmitted
from said image generating apparatus,

30 said output image adjustment unit is operable to judge the
content of the adjustment performed on the received layer, and then
to perform readjustment on the layers based on the judgment, and

said projecting unit is operable to project the readjusted layers.

[10] The image transmission system according to Claim 1,
5 wherein said transmission image adjustment unit is operable to add information, to the image, which specify a position on the projection screen of said image projecting apparatus, and

said output image adjustment unit is operable to judge the specified position, and to place the image on the position on the
10 projection screen.

[11] The image transmission system according to Claim 10,
wherein said transmission image adjustment unit is operable to perform image adjustment on the image so as to fit to the size on
15 the projection screen of said image projecting apparatus.

[12] The image transmission system according to Claim 1,
wherein said transmission image adjustment unit is operable to perform an adjustment of a resolution for the image.
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[13] The image transmission system according to Claim 12,
wherein said transmission image adjustment unit is operable to obtain beforehand information on a resolution that said image projecting apparatus is able to support, and to perform adjustment
25 on the resolution of the image based on the resolution information.

[14] The image transmission system according to Claim 12,
wherein said output image adjustment unit is operable to perform readjustment on the resolution of the received image, in the
30 case where the resolution adjusted by said transmission image adjustment unit does not match the resolution that said image projecting apparatus is able to support.

[15] The image transmission system according to Claim 1,
wherein said transmission image adjustment unit is operable
to set an area, in the image, to be transmitted to said image
5 projecting apparatus.

[16] The image transmission system according to Claim 15,
wherein said transmission image adjustment unit is operable
to set a layer, as the area, which is located at a frontmost position in
10 the display of said image generating apparatus out of the layers
composing the image.

[17] The image transmission system according to Claim 15,
wherein said transmission image adjustment unit is operable
15 to set an area, as the area, specified by a user in the image.

[18] The image transmission system according to Claim 1,
wherein said transmission image adjustment unit is operable
to perform image adjustment on a compression degree of the image,
20 to compress the image and to add information related to the
compression to the compressed image, and
said output image adjustment unit is operable to judge the
information related to the compression and to decompress the
received image.

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[19] The image transmission system according to Claim 1,
wherein said transmission image adjustment unit is operable
to set an authorization related to an occupancy on the projection
screen of said image projecting apparatus, and to add the
30 information related to the authorization to the image, and
said output image adjustment unit is operable to judge
whether or not the received image is allowed to be projected based

on the information related to the authorization.

[20] The image transmission system according to Claim 1,
wherein said transmission image adjustment unit is operable
5 to predict a display image to be projected on said image projecting
apparatus, and to correct the image based on the prediction.

[21] The image transmission system according to Claim 1 further
comprising

10 a remote controller operable to operate said image projecting
apparatus,

said remote controller includes:

an operation input unit operable to accept an operation of said
image projecting apparatus by a user; and

15 an emulation mode setting unit operable to virtually set an
input by said operation input unit to an input mode by an input unit
of said image generating apparatus, and

said image projecting apparatus includes:

20 a remote controller code receiving unit operable to obtain an
operation signal inputted in said operation input unit; and

a signal transmission unit operable to transmit the obtained
operation signal to said image generating apparatus,

said image generating apparatus includes:

25 a signal receiving unit operable to receive the operation
signal; and

a key emulation unit operable to convert the received
operation signal into an input by the input unit of said image
generating apparatus.

30 [22] An image transmission method for transmitting a plurality of
images from a plurality of image generating apparatuses, each of
which generates an image, to an image projecting apparatus which

projects the images through a multimode, in which the plurality of images are simultaneously projected onto a projection screen divided into a plurality of segments,

5 said method comprising the following steps executed by said image generating apparatus:

an image generating step of generating an image;

a transmission image adjustment step of performing adjustment on the image related to an image transmission and an image projection by said image projecting apparatus; and

10 a transmission step of transmitting the adjusted image to said image projecting apparatus, and

said method comprising the following steps executed by said image projecting apparatus:

15 a receiving step of receiving the image transmitted from said image generating apparatus;

an output image adjustment step of judging a content of the adjustment performed on the received image, and performing readjustment on the image based on the judgment; and

a projecting step of projecting the readjusted image.

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[23] An image generating apparatus in an image transmission system which includes a plurality of image generating apparatuses, each of which generates an image, and an image projecting apparatus which projects the plurality of images transmitted from
25 said image generating apparatus through a multimode, in which the plurality of images are simultaneously projected onto a projection screen divided into a plurality of segments, said image generating apparatus comprising:

an image generating unit operable to generate an image;

30 a transmission image adjustment unit operable to perform image adjustment on the image for one of an image transmission and an image projection by said image projecting apparatus; and

a transmission unit operable to transmit the adjusted image to said image projecting apparatus.

[24] A program for an image generating apparatus in an image transmission system which includes a plurality of image generating apparatuses, each of which generates an image, and an image projecting apparatus which projects the plurality of images transmitted from said plurality of image generating apparatuses through a multimode, in which the plurality of images are simultaneously projected onto a projection screen divided into a plurality of segments, said program causing a computer to execute:

- an image generating step of generating an image;
- a transmission image adjustment step of adjusting the image for one of an image transmission and an image projection by said image projecting apparatus; and
- a transmission step of transmitting the adjusted image to said image projecting apparatus.

[25] An image projecting apparatus in an image transmission system which includes a plurality of image generating apparatuses, each of which generates an image, and an image projecting apparatus which projects the plurality of images transmitted from said image generating apparatus through a multimode, in which the plurality of images are simultaneously projected onto a projection screen divided into a plurality of segments, said image projecting apparatus comprising:

- a receiving unit operable to receive the image transmitted from said image generating apparatus;
- an output image adjustment unit operable to judge a content of the adjustment performed on the received image, and then to perform readjustment on the image based on the judgment; and
- a projecting unit operable to project the readjusted image.

[26] A program for an image projecting apparatus in an image transmission system which includes a plurality of image generating apparatuses, each of which generates an image, and an image projecting apparatus which projects the plurality of images transmitted from said image generating apparatus through a multimode, in which the plurality of images are simultaneously projected onto a projection screen divided into a plurality of segments, said program causing a computer to execute:

10 a receiving step of receiving the image transmitted from said image generating apparatus;

 an output image adjustment step of judging a content of the adjustment performed on the received image, and then to perform readjustment on the image based on the judgment; and

15 a projecting step of projecting the readjusted image.